Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

PROPOSED/FINAL MINOR REVISION OF TITLE V PERMIT: NO. V-99-050 (REVISION 2)
DOW CORNING CORPORATION
CARROLLTON, KENTUCKY 41008
November 15, 2001
COMPLETED BY: JILL BERTELSON, P.E.

SOURCE DESCRIPTION:
Dow Corning Corporation is a synthetic organic chemical manufacturing industry (SOCMI) falling under SIC code Group 28. The primary operation at the Carrollton plant consists of the manufacturing of silicone-based compounds. The primary raw materials at the plant are silicon, methanol, hydrochloric acid, and methyl chloride. The methanol and hydrochloric acid are combined to produced methyl chloride, which is then reacted with the silicon metal to produce various silicone-based chemicals.

The plant also includes several support activities such as Utilities, Waste Treatment, Quality Assurance Laboratories, Barge Unloading, Product Shipping and Research & Development (labs and pilot plants).

CREDIBLE EVIDENCE:
This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

APPLICATION COMMENTS:
I. Initial Issuance, Log # E805
II. Significant revision, Log # 53629, 53447
III. Minor revision, Log # 53465

I. INITIAL ISSUANCE, LOG # E805

COMMENTS:

a. Type of control and efficiency:
In addition to many local control devices, the primary control strategy for the plant is the Vent Header System (VHS), a complex collection and transport system for most of the major vents in the plant. Several hundred affected facilities are tied into the VHS and the central control device in this system is a natural gas-fired thermal oxidizer, T-10. The T-10 Unit has most recently been tested in 1991 and 1995. The testing was performed in accordance with NSPS requirements (40 CFR 60 Subparts NNN, RRR, Kb).

Alternative control strategies under the VHS are the P-10 recycle mode and the B-2 Scrubber.

b. Emission factors and their source:
A combination of AP-42 emission factors, material balance, site testing and vendor guarantees have been used to estimate emissions in the application.

c. Applicable Regulations:
(Note: The following list does not include any generally applicable regulations)
Regulation 401 KAR 51:017 (40 CFR 52.21) applies to the 703 and 766 Boilers
Regulation 401 KAR 59:435 (40 CFR 60 Subpart Dc) applies to the 766 Boiler.
Regulation 401 KAR 60:042 (40 CFR 60 Subpart Db) applies to the 767 Boiler.
Regulation 401 KAR 61:015 applies to the 600, 601, 657 Boilers and the 1114, 3201, 2202 Furnaces.
Regulation 401 KAR 59:015 applies to the 703, 766, 767 Boiler and the 2211, 3600, 5250 Furnaces.
Regulation 401 KAR 59:725 (40 CFR 60 Subpart NNN) applies to several distillation units at the plant (see permit for details).
Regulation 401 KAR 60:700 (40 CFR 60 Subpart RRR) applies to several reactor systems at the plant (see permit for details).
Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) applies to several storage vessels at the plant (see permit for details).
Regulation 401 KAR 63:101 (40 CFR 63 Subpart F) applies to the D-1, D-10 and Barge Unloading Areas.
Regulation 401 KAR 63:160 (40 CFR 63 Subpart H) applies to the pipeline equipment in the D-1, D-10 and Barge Unloading Areas.
Regulation 401 KAR 59:010 applies to all the sources of non-combustion, process particulate emissions at the Carrollton plant.
Regulation 401 KAR 63:070 (40 CFR 63 Subpart D) applies to plant-wide emissions of hazardous air pollutants (HAPs).
Regulation 401 KAR 63:010 applies to fugitive dust emissions from the Filter Press Storage Area.

d. Regulations that are not applicable:
1. For specific affected facilities: Many of the NSPS facilities (distillation columns, reactors, storage

vessels) are exempt from the corresponding NSPS standards. For specific reasons of exemption, please see Section B of the permit.

2. Site-wide non-applicable regulations and the reasons for exemption are covered in Section J of the permit.

e. Source-specific proposals:

1. *Emission and Operating Caps Description:*

   i. Early Reductions Emission Cap:
   Dow Corning Corporation is covered by 401 KAR 63:070 (40 CFR 63 Subpart D), Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants. Based on a 90% reduction of their 1988 base year HAP emissions, Dow Corning will be subject to an enforceable emissions cap of 33.4 tpy of hazardous air pollutants.

   ii. Synthetic Minors:
   Dow Corning has previously received the following synthetic minor permits:
   C-88-068, (Namex Expansion) issued April 28, 1988 for VOC and PM_{10} emissions.
   C-89-015, (Namex Wastewater Upgrade) issued March 6, 1989 for VOC emissions.
   C-91-155 (MCDS Project) issued October 25, 1991 for VOC emissions.

2. *Site-wide Netting Description*:
   The three synthetic minor permits listed above contain a 40 tpy cap for emissions of VOC. With this permit action, the permittee has requested relief from the individual VOC emission caps in each permit. This request was based on the belief that the potential emissions from the affected facilities covered in these permits were over-estimated in the original construction permit applications. After several years of actual operation of these affected facilities, reliable data is now available to determine their true potential.

   The division has agreed to relieve the permittee of the individual VOC emission caps provided that the permittee can demonstrate the "net significant emission increase" for VOC is less than 40 tpy over the 10-year contemporaneous period dating from 1988 to 1997.

   In evaluating this netting submittal, the division has relied upon the following information:

   i. As defined in Regulation 401 KAR 51:017, Section 1(30)(b)(1), the "contemporaneous netting" period is a 10-year period, in this case from 1988-1997. This period coincides with the year of issuance of the earliest of the three synthetic minor permits (1988) and the year that Dow Corning submitted the request to "net out" of the synthetic minor limits (1997).

   ii. As defined in Regulation 401 KAR 51:017, Section 1(b), "actual emissions" are the average emission rate during the preceding 2-year period. For 1988, the actual emission rate was taken to be the average emission rate during the years 1987 and 1988. For 1997, the actual emission rate was taken to be the average emission rate during the years 1996 and 1997.

   iii. All sources of VOCs at the Dow Corning plant were considered in this netting exercise. For sources that were not constructed in 1988, the actual emission rate was taken to be zero for 1988. For sources that were no longer in existence in 1997, the actual emission rate was taken to be zero for 1997.

iv. The emission change for each source of VOC over the contemporaneous netting period was calculated as the difference between the 1997 actual emission rate and 1988 actual emission rate.
v. The "net significant emission increase" for the entire plant was calculated as the sum of the individual emission changes.

The results of the calculations specified in Items 4. and 5. above have been tabulated in Attachment I.A. As seen from this table, the "net significant emission increase" for VOC over the 10-year contemporaneous period is -391.41 tpy which is less than the "significant net emission rate" specified for VOC in Regulation 401 KAR 51:017, Section 22 (40 tpy). Based on this demonstration, the division has concluded that the affected facilities covered in the three synthetic minor permits did not trigger PSD applicability. Therefore, the division has made a decision to rescind the applicability of the three individual emission caps of 40 tpy of VOC.

To ensure that the reductions claimed in the netting exercise are state- and federally-enforceable, two significant changes have been made to the permit.

i. For the points with the largest reductions, individual operating/emission limits have been added to the permit for specific emission points as detailed below:
   (a) Emission Point A2.06 - An operating requirement to vent to the T-10 thermal oxidizer 90% of the time has been added to the permit.
   (b) Emission Point D1.01 - An emission limit of 20 tpy of VOC has been added to the permit for this emission point.

   (c) Emission Point W.07 - An emission limit of 6 tpy of VOC has been added to the permit for this emission point.
   (d) Emission Point W.09 - An emission limit of 5 tpy of VOC has been added to the permit for this emission point.

   Periodic monitoring, recordkeeping, and testing requirements have been added at each of these emission points to ensure compliance with their respectively operating/emission limits.

ii. A site-wide cap on VOC emissions of 145 tpy has been added to the permit. The requirements established under Early Reductions have been extended to VOC sources to ensure compliance with the VOC emission cap. The permittee is now required to keep records of actual VOC emissions from each source of VOC and rolling 12-month totals of VOC emissions. These emissions are to be reported on a 6-month basis.

PUBLIC AND U.S. EPA REVIEW:

On December 24, 1997, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in the newspaper of largest circulation in Carroll County. The public comment period expired 30 days from the date of publication. During this time, the only comments received were from Dow Corning in a letter dated January 22, 1998. The division's response to these comments is included in Attachment I.B. to this section.

Concurrently, the draft permit and all supporting materials were made available to U.S. EPA, Region IV for review. The 45-day EPA review period also began on December 24, 1997. In an electronic transmission dated January 29, 1998, U.S. EPA provided several comments on the draft permit. The division's response to these comments is included in Attachment I.C. to this section.

As a result of the comments received from Dow Corning and U.S. EPA, there are several changes in the proposed permit from the draft permit. All of these changes have been specifically identified in Attachments I.B. and I.C. Since the changes made to the permit are considered significant, a public notice on availability of the proposed permit will be published soliciting public comments for a period of 30 days beginning with the publication of the notice.

ATTACHMENT I.A.

PSD NETTING SUMMARY TABLE

ATTACHMENT I.B.

RESPONSE TO DOW CORNING COMMENTS

From: Adam T. McNeese[SMTP:atm@dcrn.e-mail.com]
Sent: Monday, July 13, 1998 11:22 AM
To: Pole, Kumar (NREPC, DAQ)
Subject: Comments from Dow Corning to DAQ - 1/22/98

DOW CORNING COMMENTS, TITLE V DRAFT PERMIT

A. Under "PERMIT STATEMENT OF BASIS"

1. p. 1: Under primary raw materials, list should include "silicon", not "silica". Hazards and handling requirements are different for these two very different components.
   Response - Kentucky DAQ (KDAQ) concurs with this comment. The appropriate changes have been made to the Statement of Basis.

2. p. 2 : Item e. a. RE: early reductions cap:
   30.3 tpy of hazardous air pollutants should read 33.4 tpy (basis: 303.3 Mg/yr '88 baseline year emissions, therefore AEL at 90% = 30.3 Mg/yr allowable or 33.4 tpy).
   Response - KDAQ concurs with this comment. The appropriate changes have been made to the Statement of Basis.

3. p. 3 : Item b; Concurrent with this comments letter, Dow Corning has written and submitted a waiver request to D.Neely, USEPA concerning the requirement for an opacity monitor for 767 boiler while using fuel oil as a backup fuel.
   Response - At the time of release of the draft permit, the waiver request had not been submitted. Since that time, Dow Corning has submitted the request and U.S. EPA has generally approved the request provided certain requirements are added to the permit. KDAQ has also reviewed and approved the request. The appropriate changes have also been made to the permit.

B. Under actual "DRAFT"

1. Page 4, item 1 RE: Boiler 767 comments:
   As currently and correctly identified under "Operating Limitations", Both 766 and 703 boilers have operating limitations for natural gas and 767 has only an operating limitation for fuel oil. Therefore, under Compliance Demonstration Methods, item b.) the heat input calculation should apply only to 703 and 766 boilers, not 767 boiler. This change is also consistent with the monitoring requirements listed on p. 7 (4.a.iii) for boilers 703 and 766. (Note: 703 and 766 permits were PSD permits).
   Response - KDAQ concurs with this comment. The Compliance Demonstration Methods have been separated so that the requirements for each boiler are clearly spelled out. Heat input calculations are only required for the 703 and 766 boilers. The method of heat input calculations has been changed

as a result of EPA comments (see Response to U.S. EPA comments). The 767 boiler has operating restrictions on the use of fuel oil only and corresponding Compliance Demonstration requirements have been added to the permit.

2. Page 6, 3.a. comments:
Concerning the requirement for emission testing of all boilers during the permit term(except 767), Dow Corning continues to find it objectionable and unreasonable to require an emissions test for each of its three smaller (60's vintage and less than 60Mmbtu/each) boilers 600, 601, and 657. These three are primarily in standby mode and may or may not continue to be maintained and operational during the permit term. To automatically require a performance test irrespective of the operational status of these units is problematic. In addition, the relevant emission standards (SO2 and PM10 only) for these units are quite easily met by using the same low sulfur-content fuel oils as the larger NSPS boilers. The combination of the high regulatory allowables and the cleaner fuel (see attached chart) results in a very high probability of successful performance. Dow Corning holds to its position that an automatic test requirement is a very unnecessary "discretionary" requirement to be imposed, with little/no environmental benefit. As an alternative, Dow Corning would accept a more practical application of this testing requirement for these particular units which could be triggered if during any two consecutive years a given unit operates at greater than a 30% annual capacity factor. (Reference our 10/7/97 comment Memo)
Response - KDAQ partially concurs with certain aspects of this comment. These units have never been tested and as such compliance has never been demonstrated for these units. Thus, a requirement to test may have more than the insignificant benefit that Dow perceives. However, taking into account the limited operational status of these boilers, KDAQ has decided to defer the testing which will now be triggered if any of these units operate at a annual capacity factor greater than 30% during any consecutive 12-month period. The permit language has been changed accordingly.

3. Page 6, 3.c. comments:
There is no underlying requirement to justify the provision for requiring testing of natural gas for sulfur content. This provision should be removed. (This change would then be consistent with the wording found on page 7, 4.a. iii, Specific Monitoring Requirements, "The sulfur content of each type of fuel oil burned.")
Response - KDAQ has examined this issue and concluded that testing of natural gas for sulfur content is not intended nor necessary. Accordingly, Condition 4.a.iii. has been reworded as suggested by Dow Corning.

4. Page 7, 4.b and c. Comments:
Dow Corning interprets the monitoring required to be performed as either "b" or "c"; the former having to do with a daily log recording "normal" visible emissions from the stack, the latter having to do with what to do when "abnormal" visible emissions are observed. There is still an apparent contradiction in the wording offered in "b.iii" and "c" to address "visible" emissions. It is clear that the intention of "c" is to address only abnormal visible emissions. This comment is consistent with previous discussions with the Division.
Response - KDAQ has examined this issue and concluded that NO visible emissions monitoring is

required when natural gas or fuel oil No. 2 are the fuels used. Visible emissions monitoring is still required when fuel oil No. 6 is used in any boiler.
Dow Corning has misunderstood the monitoring requirements. The requirements are not a choice between “b” or “c” but are a 2-step process consisting of “b” AND “c”. The first step is mandatory and consists of observing each stack and noting whether or not visible emissions were observed. This step is intended to provide an assurance that visible emissions are, in fact, being monitoring routinely in an effort to determine compliance with the applicable standards. The permittee is required to maintain records of these observations.

The second step is predicated on the results of the first step; it is required only if ANY abnormal emissions are observed. If any abnormal visible emissions are observed, the permittee is required to record the following information:

(1) The color of the emissions;
(2) Whether the emissions were light or heavy;
(3) The total duration of the visible emission incident;
(4) The cause of the abnormal emissions; and
(5) Any corrective actions taken.

The permittee is then expected to use the records generated by Steps 1 and 2 (as necessary) to certify compliance with the Title V permit. Given the confusion that appears to exist with the current language, KDAQ has modified the visible emission monitoring requirements in an attempt to clarify them. Similar changes have been made to other parts of the permit where visible emissions monitoring is required.

5. Page 17, 3. B. Comments:
Emission points W.07, W.08, W.09, and W.22 are not tanks and should not appear on this list. Since these are "process vents" associated with the waste treatment area, AP42 tank calculation methodology (per p. 18) is not appropriate. Also, emissions from these units have been certified "de minimis" Early Reductions (HAP) Sources by Dow Corning (Ref. 12/5/97 Certification letter). The monitoring provisions for these vents are already covered on page 65, 66 of the Draft. If these points remain on the p.17 list, two different calculation methodologies/compliance methods will be specified for these points within the permit.
Response - KDAQ concurs with this comment. Accordingly, Emission points W.07, W.08, W.09, and W.22 have been removed from Section B - Tanks. The requirements under Section B - Wastewater Quench & Filter Press Processes and Section B - Group Requirement 4 (Early Reductions Requirements) continue to apply to these emission points.

6. Page 27, 2. C.ii. Comments:
Correct HCl calculation to represent "HCl" emissions calculated from "HCl emission factor" (Current reading shows erroneously "Chlorine").
Response - KDAQ concurs with this comment. The appropriate changes have been made to the permit.
7. Page 41, 1.A. Comment:
The daily sampling/analysis specified in the Draft permit is redundant to the use of an analyzer already

in place. Using the analyzer data is consistent with application data already submitted for this emission point. This analyzer type is located and used similarly to the monitoring prescribed for the A10.08 analyzer described accurately in the Draft on pp. 45.

Response - KDAQ concurs with this comment. The monitoring prescribed for the A-2 Secondary Recovery (Pg. 41) has been clarified to specify the use of the online analyzer, consistent with procedures currently followed at the plant and similar to those prescribed for the A-10 Secondary Recovery on Pg.45.

8. Pages 47-49,& 58 (Maintenance scrubbers B2.01, B10.01, B20.01, R10.01) Comments:
These 4 scrubbers are used on an infrequent basis during small reactor bed changeouts. Dow Corning does not object to the need to record the frequency and duration of these activities. However, we do advocate that emissions from these sources are "de minimis" Early Reductions (HAP) Sources and should be identified in the final permit accordingly. DPR.02 is another permitted maintenance scrubber emission point that meets "de minimis" criteria, but is now not listed anywhere in the Draft permit. This omission should be corrected. Dow Corning anticipates the addition/use of these or other small maintenance-only scrubbers in the near future. It must be understood that the Reactors being vented are isolated and the process is shutdown when these infrequent scrubbing operations are performed. This normally takes just a few hours until Dow Corning safety personnel are certain the solid material in the reactor is safe for handling and removal. This occurs at a frequency of no more than one to two times a month. The following qualifying condition included in the permit would be acceptable to Dow Corning to establish the "de minimis" nature of these units: " The equipment shall vent to the scrubber only during periods of shutdown for maintenance activities". (This wording is extracted directly from a current permit for one of these small units)

Response - Emission points B2.01, B10.01, B20.01 and R10.01 were already included in the draft permit. Emissions Point DPR.02 has been added to the permit in the “de minimis” half of the Early Reductions Section. Additionally, a complete list of Early Reduction emission points that are considered “de minimis” has been added to the Early Reductions Section of the permit. This should address Dow’s concerns with regards to these emission points.

It should be noted that designation of an emission point as “de minimis” does not exempt that emission point from any Early Reductions requirements. This designation was developed internally by KDAQ purely as means of differentiating the larger emission points from the smaller ones. We believe this will enable us (Dow and KDAQ) to target our resources on those emission points that account for the bulk of the HAP emissions.

9. Page 52, 53 comments:
"Process feed rates" are a confidential portion of our application/certification and as such would not be a better representative parameter than "vent feed rate". As such, vent feed rate should be the emission compliance measurement. Consistent with condition 4. A. "vent feed rate" would be an acceptable record requirement in place of "process feed rate" at 5. A. Inclusion of "process feed rate" monitoring would require Dow Corning to maintain/submit all associated records as CBI (confidential business information).

Response - KDAQ concurs with this comment. The inclusion of “process feed rates” was a typographical error. Maintenance of records of the “process feed rates” was neither intended nor necessary since emissions are not a function of the “process feed rates”. Condition 5.a has been changed to require records of the vent feed rate instead. Other instances of this error have also been corrected.

10. Page 59 comment:
Based on historical testing and correlations, Dow Corning has previously documented for the Division that the presence of formaldehyde at the listed vents is due to the "leakage" of air "into" the process system because it is under vacuum. When air enters these processes, the unwanted byproduct formaldehyde forms in trace amounts (5-10 ppm) in the vapor space. Nitrogen carries this byproduct out the vent stack. The emission rates have been shown to be independent of process rate and Dow Corning has accordingly certified these points as 'de minimis' Early Reductions Sources for HAPs. (Reference 12/5/97 Title V Recertification)

Currently no vent flow rate instruments exist at these points, however, vacuum pump capacity and Nitrogen flow rates are known. Worst case calculations (at system capacity) have been submitted and reviewed by the Division which show an emission rate 10X lower than that which would trigger RACT. We don't agree that a vent flow instrument on each of these vent points is warranted given the low levels of HAP emissions. No change in process is anticipated over the permit term that would change the rate or total trace amount of this pollutant.
Response - KDAQ concurs with this comment. Requirements for the F and L Areas have been changed accordingly.

11. Page 65, 66 comments:
Based on over twenty data points from historical testing and sampling over the last several years, Dow Corning has provided the Division evidence to document the HAP "de minimis" status of these quencher units (W.07, W.08, W.09, W.22) for any regulated air pollutants. The call for monthly or quarterly sampling and testing from these units is a burdensome requirement given the small ppm concentrations of a few HAPs. Greater than 99.9% of the vent is nitrogen and/or hydrogen and methane/ethane. Dow Corning would suggest at a maximum an annual sampling/testing requirement, but even this seems unnecessary given the consistent results from these negligible emission points.
Response - KDAQ does not concur with this comment. KDAQ continues to believe that monthly or quarterly sampling is appropriate for emission points W.07, W.08, W.09 and W.22 which do not qualify as de minimis activities (and cannot be considered “negligible”).

Although the absolute concentration of HAPs in the vent stream from these units is small, even a small change in concentration is sufficient to cause a large change in emissions given the large volume of the vent streams. Calculations submitted by Dow in the Netting Application indicate that the emissions potential of these points is as high as 6.8 tpy of MeCl. Given these facts, KDAQ believes the sampling requirements as written are appropriate.
Dow Corning's application updated its previous calculations and certification for a post-1997 quencher unit to be designated emission point W.24. This was also certified as meeting 'de minimis' Early Reductions source criteria. It however has not been included in the current Draft. Dow Corning requests that this oversight be corrected.
Response - KDAQ regrets the oversight. DPR Quench Unit W.24 has been added to the permit in the Early Reductions Section as a “de minimis” activity.

12. Page 69 , item 8 comment:
"Source-wide" is understood by Dow Corning to be "site or facility-wide' and not just limited to those sources identified in the listing on pp. 67 and 68. The Division should consider some additional clarifying language to avoid misunderstandings down the road.
Response - KDAQ concurs with Dow Corning's understanding that "source-wide" implies all sources of VOC with the Dow Corning plant premises and is not restricted to merely those emission points that are identified on Pages 67 and 68. A table (see pages 72-75 of the permit) has been added to the permit that specifically identifies all VOC emission sources that are subject to the source-wide emissions cap for VOC.

(Dow comment 12 continued) By way of further explanation, the proposal for a site-wide VOC cap is one that makes good environmental sense in Dow Corning's opinion. Currently there are no VOC limits for any process units operating before roughly a 1990 timeframe. It's conceivable that actual emissions could rise as high as the total cumulative listed potential to emit. The Statement of Basis document lists this as 407 tpy. By accepting a new total facility-wide cap of 145 tpy for VOCs, Dow Corning would be showing its continuing commitment to the environment now and in the future.
Response - Since the time of release of the draft permit, Dow Corning has submitted to the Division, a Netting Application. This netting submittal demonstrates that Dow Corning is able to "net out" of the three previous synthetic minors. This eliminates the carry-over of the three previous synthetic minor limits for VOCs.
Significant changes were made to the permit in the Group Requirements Section as a result of this action, including:

1. Removal of the three synthetic minor limits for VOC.
2. A Group Requirement Section has been retained for VOC. This section now documents that Dow Corning has submitted a Netting Application and that this application demonstrates that Dow Corning is able to "net out" of previous synthetic minors.
3. A facility-wide emissions cap of 145 tpy of VOC has been established.

13. Page 73-75 Comment:
Several minor (de minimis) Early Reductions (HAP) emission points are not listed in the Draft currently on the 'Source' list. Emission points B20.01, B20.03, DPR.02 are currently permitted and in operation. These have been overlooked and omitted from the Draft and need to be included in this list. Data has been submitted previously to the Division for each of these emission points. The post-1997 installation of quencher W.24 is also not included in this list.
Response - Emission points B20.01 and B20.03 are already included in the draft permit. The confusion may stem from the fact that Dow considers them de minimis but KDAQ does not. Therefore, they appear in the permit as significant HAP sources, not in the de minimis section (see pages 49 and 80 respectively).
KDAQ concurs that emission points DPR.02 and W.24 were not included in the draft. They have now been added to the permit.
Given the difficulty that exists with respect to locating emission points in general, KDAQ has added two new indexes to the permit - The first, added to the Early Reductions section, lists each source of HAPs that is part of the Early Reductions application. The second, added to VOC Group

Requirements, will consist of a global list of all VOC emission points. Both lists are indexed with the page number(s) on which each emission point appears.

14. Page 77, 6. A. Comment:
De minimis definition should be changed to either uncontrolled "or" controlled (versus "and") emissions. As an example, given that small intermittent-use maintenance scrubbers are frequently used in various areas of the plant (See pp.47-49, 58 comments above), and have been included in Dow Corning's Source definition. If a 99% efficient unit is utilized and easily stays below an actual "controlled" emission rate of say 600 lbs/year, it would not however meet the "uncontrolled" criteria specified. Permit reopenings would be frequent apart from this change. Dow Corning contends that either "controlled" or "uncontrolled" criteria should therefore be sufficient to determine an individual emission point's de minimis status.
Response - KDAQ disagrees with this comment. KDAQ would like to emphasis again that a definition of "de minimis" was developed solely to establish the level of monitoring, recordkeeping and reporting (MRR) activities required depending upon the potential of each Early Reductions emission point. KDAQ defined a "de minimis" emission point as one that "that has potential to emit less than uncontrolled ten (10) percent and controlled emissions less than one (1) percent of the source wide threshold". While the emission thresholds (10% and 1%) were somewhat arbitrarily chosen, KDAQ firmly believes that the 2-criteria (both uncontrolled and controlled) approach is the proper and logical choice.

This is best demonstrated using the example given above. The source with a controlled PTE of 600 lbs meets the criteria of controlled emissions less than 1% of the sourcewide threshold (33.4 tpy). If we use the "uncontrolled OR controlled" (versus "AND") definition proposed by Dow and neglect the uncontrolled PTE of 60,000 lbs [600/(1-0.99)], the emissions source would be considered "de minimis" with minimal MRR requirements. However, this approach overlooks the fact that a control device with an assumed 99% efficiency is limiting the PTE to 600 lbs. If the scrubber efficiency were to drop down to even 98.5%, the controlled PTE now becomes 900 lbs, which is greater than 1% of the sourcewide threshold (33.4 tpy).

Clearly then, the scrubber is instrumental in deciding whether or not the emission source is de minimis and some MRR activities must be prescribed for the scrubber to provide some reasonable assurance that it is meeting an operational efficiency of 99% on a continuing basis. Using the approach proposed by Dow, no MRR requirements would be necessary for the scrubber since the emissions source would already be considered de minimis.
On the other hand, using the approach proposed by KDAQ, the emission source does not meet the definition of de minimis since the uncontrolled PTE is 60,000 which is greater than 10% of the sourcewide threshold (33.4 tpy). With this approach, it becomes immediately apparent that MRR activities are necessary for the scrubber.
As demonstrated by this example, KDAQ believes both uncontrolled and controlled emissions potentials must be considered in determining de minimis emissions sources. No changes were made to the permit as a result of this comment.

15. Pages 82 to 86 Insignificant Activities Section , Comment:
Dow Corning notes that all of the generally-described activities listed and certified in its application (Reference 7007 Form DD, 12/5/97 Submittal) have not been included in the Draft. Dow Corning believes it is important to address these activities in some way within the Permit, so there is no misunderstanding with the Division in future years during inspections/audits, etc. Also, Dow Corning notes that these same activities have been included in other Title V permits for major sources and should be consistent in our permit with previous determinations.
Response - KDAQ regrets the oversight. The activities certified as insignificant on Form DD have been added to the permit in Section C, Item 21. Miscellaneous:

ATTACHMENT I.C.

RESPONSE TO U.S. EPA COMMENTS

ELECTRONIC TRANSMISSION

Date: **January 29, 1998**

To: **Kumar Pole, Kentucky DAQ**
Thomas Adams, Kentucky DAQ

From: **Yolanda Adams, EPA Region 4**

Subj: **EPA Informal Comments on Draft Title V Permit**
Facility: **Dow Corning Corporation, Carrollton, Kentucky**

Below are informal comments from EPA Region 4 on the above referenced source. Please call me at your convenience so that we may discuss our comments and your resolution. You can reach me at 404/562-9116. Thanks. ***Yolanda***

Objectionable Items

1. Missing Applicable Requirement - Please provide information regarding the date on which the construction of Boiler 703 commenced. This information is being requested in order to determine whether this boiler is subject to New Source Performance Standard (NSPS) Subpart Db. According to the permit application, Boiler 703 is not subject to NSPS Subpart Db due to its date of construction. According to Section (1) of the permit, however, the boiler was "installed" on September 1, 1987, which is more than three years after the applicability date for Subpart Db (June 19, 1984). Therefore, it is at least possible that the boiler is also subject to NSPS. It is important to determine whether the boiler is subject to NSPS because it will be necessary to revise the permit to include applicable Subpart Db monitoring requirements for NO_x and opacity if it is subject to NSPS.

   Response - The boiler in question was constructed and delivered to Dow Corning's Midland plant in the late 70's. The boiler was then moved to the Dow Corning plant in Carrollton, Kentucky in 1987. While the boiler was new to Kentucky, the actual date of construction was prior to June 19, 1984, and hence the Division made a determination that the boiler was not subject to Subpart Db. The 703 Boiler was permitted as a PSD source in Kentucky Permit C-87-059. The permit was subject to public and U.S. EPA review.

   The column that was previously titled "Date of Installation" has been changed to "Date of Construction". Additionally, a note has been added to the permit to clarify the actual date of

construction of the 703 Boiler.

2. Missing Applicable Requirement - SIP regulation 401 KAR 59:015 applies to boilers 703 and 766. If it is the Division's intent to streamline multiple applicable requirements on the same emissions unit, then the procedures in White Paper 2 should be followed. The streamlined limit should list both the streamlined applicable requirement and the subsumed applicable requirement as the permit term authority. In addition, the streamlining must be supported by an adequate technical demonstration included in the public record for the permit.

   Response - Both the 703 and 766 Boilers were permitted as PSD sources and are subject to Regulation 401 KAR 51:017 (PSD regulation). In addition, they are subject to SIP Regulation 401 KAR 59:015. Neither of these regulations specify precise monitoring, record keeping, or reporting requirements. Since there are no redundant or conflicting monitoring, record keeping and reporting requirements, the question of streamlining did not arise for these two boilers.

   During the Title V review process, Kentucky DAQ reexamined the emission limitations for these 2 boilers under Regulations 401 KAR 59:015 and 51:017 and concluded that the BACT emission limits under 51:017 were more stringent than those under 59:015. This being the case, only 51:017 was listed as the applicable requirement.

   However, KDAQ has now added 59:015 as an applicable regulation for both the 703 and 766 Boilers with clarification indicating that the regulation is superseded by the standards under 51:017 (PSD).

3. Authority - Pursuant to part 70 regulations, 70.6(a)(1)(i), the permit shall specify and reference the origin and authority (i.e. the applicable requirement upon which the term or condition is based) for each term or condition. Even though the Division has done this consistently throughout most of the permit, some conditions are missing citations for origin and authority. For example, in page 4, section B(1)1., the permit conditions which establish operating limitations for the boilers don't have a reference to their origin and authority. The permit should be revised to meet the part 70 requirements.

   Response - Kentucky DAQ has re-examined the permit for missing citations of origin and authority and we believe that all deficiencies have been corrected.

4. Periodic Monitoring - The permit does not require sufficient periodic monitoring to ensure compliance with applicable requirements for the following pollutants for each respective boiler:
   - Boiler 703 - Particulate matter and NO_x
   - Boiler 766 - Particulate matter and NO_x
   - Boiler 600 - Particulate matter
   - Boiler 601 - Particulate matter
   - Boiler 657 - Particulate matter
   - Boiler 767 - Particulate matter

   The draft permit provides for periodic testing (i.e., testing in the 12 month period immediately preceding the expiration of the permit) to verify compliance with the emission limits for the referenced pollutants, but periodic testing alone does not constitute an acceptable periodic monitoring approach unless

adequate justification is provided in the permit statement of basis. Under the terms of the draft permit, it is also unclear what information Dow Corning would use as the basis for its annual certification of compliance with the referenced limits in the first few years of the permit term, since the permit does not require testing until late in the permit term.

Response - Kentucky DAQ believes that as long as Dow Corning burns only the fuels listed in the permit, the boilers should be able to meet each respective emission limit. Combined with the requirement for periodic testing, this should be sufficient to ensure compliance and allow for annual compliance certification. KDAQ has added additional language in the permit under Compliance Demonstration Method which states that burning only the fuels permitted is deemed to be compliance with the emissions limitations for particulate matter, sulfur dioxide and nitrogen oxides (with the exception of the 767 Boiler). Additionally, the permittee is now required to maintain records of the type(s) of fuels burned at each boiler.

5. In addition, from the information provided it was not clear as to whether any of the boilers addressed in section B(1) have continuous emission monitoring systems (CEMs) for SO_2, NO_x, or opacity. For any of the boilers that have such monitoring systems, the CEMs should be identified as the required monitoring approach in the specific monitoring requirements in Section (1)4 of the permit.

   Response - With the exception of the 767 Boiler, none of the boilers have CEMs for any pollutant (nor are they required to), hence no CEMs have been identified for these boilers. The 767 Boiler is required to have a NOx CEM pursuant to Subpart Db and this requirement has been specifically identified in the permit. We do not believe any additional clarification is necessary.

6. As indicated in the comments submitted by Dow Corning on this draft permit, the company has submitted a request to EPA for a waiver of the COM requirement for boiler 767. We would like to make it clear, that if this waiver is granted, the permit must contain a condition that limits the capacity factor for fuel oil to 10%.

   Response - In anticipation of this request, Kentucky DAQ has already limited the capacity factor for fuel oil on the 767 Boiler to less than 10%. Please see condition **1.c.** on Page 4 of the permit.

7. Practical enforceability - In order for the emission standards in the permit to be practicably enforceable, they must include clearly specified averaging times that can serve as an enforceable component to determine compliance with the applicable standards. The permit must be revised to include averaging times for the applicable standards.

   Response - Kentucky DAQ is reviewing its format and wording to insure clarity and we seek your assistance in doing so. In past permits, we have implicitly stated averaging time by specifying a compliance demonstration period. We felt that this was also done in this permit. We will revise and attempt to clarify.

8. Compliance Demonstration - The method that section B(1)1 specifies for demonstrating compliance with the hourly heat input limits for boilers 703, 766, and 767 is unacceptable. According to this

section of the permit, compliance with the hourly heat input limits would be demonstrated on a monthly basis (i.e., by dividing the monthly hours of operation into the monthly heat input for each boiler). In order to effectively limit the hourly heat input for the boilers, however, the permit must be revised to change the averaging time for determining compliance from a monthly basis to an hourly basis. This is an especially significant issue for Boiler 766, since this boiler's heat input limit (97 mmBTU/hr) is just barely below the NSPS Subpart Db applicability threshold of 100 mmBTU/hr. According to the attached November 6, 1987, letter from Region 4 to the North Carolina Department of Natural Resources and Community Development, owners and operators of boilers with rated heat input capacities of between 90 mmBTU/hr and 100 mmBTU/hr should be required to monitor heat input on an hourly basis. Furthermore, this letter indicates that in the event that the hourly heat input for such boilers ever exceeds 100 mmBTU, the boilers would be considered subject to Subpart Db from the date the 100 mmBTU heat input threshold was exceeded.

Response - Kentucky DAQ concurs with this comment with respect to the 766 Boiler and has changed the permit to require Dow Corning to maintain hourly records of the heat input to the 766 Boiler. We do not concur with the need to maintain hourly records for the 703 and 767 boilers. Heat capacity is limited for the 703 boiler because of a PSD permit, the 767 boiler because of a conditional major permit. Records for PSD purposes have always been based on a 12-month rolling average, and we feel that a monthly compliance interval is appropriate for this instance. No changes have been made for the 703 and 767 boilers.

9. Missing Applicable Requirement - Section B (3) Storage Tanks - Category 1 includes tanks 785 and 954. It is stated that both these tanks are subject to 40 CFR Part 60, Subpart Kb but not the operating conditions in that Subpart. This does not appear consistent with the regulation since tanks exempt from the operating restrictions must be less the 21,000 gallons, and these tanks are both greater than this threshold.
   Response - Subpart Kb applies to both these tanks and is listed as an applicable regulation for both because they (i) have a capacity greater than 40 m^3 (10,568 gallons); (ii) are used to store volatile organic liquids (VOL); and (iii) were constructed after July 23, 1984.

   However, a tank subject to this regulation is not automatically subject to operating restrictions. The operating restrictions in Subpart Kb are based on a combination of capacity and true vapor pressure (TVP). Neither of these 2 tanks fall with range of combinations of storage capacity and TVP listed in 60.112b (a) and 60.112b (b) and are therefore, not subject to any of the operating restrictions in Subpart Kb (internal or external floating roof or closed vent system to control device).

   The only requirement in this regulation that applies to these tanks is 60.116b (b) and this has been listed in the permit (see page 12, Item **5. Specific Recordkeeping Requirements**).

10. Compliance Demonstration - Section B(8)1 states that the permittee shall record the occurrence and duration of each incident when the hoppers are in operation but the baghouse is not. This permit condition needs to be reworded. If the process is operating and the baghouse is not, then this would demonstrate noncompliance. The same issue is germane to Section B(9)1 A-2 Process Area and

Section B(19)1 G-2 and G-10 Process Areas regarding the Compliance Demonstration Method.

Response - Kentucky DAQ does not see the need to reword this condition. Under normal operating conditions, the baghouse are always in operation anytime the hoppers are in use. Therefore, as a compliance demonstration method for this requirement, it is far more practical to record deviations from the normal operating conditions rather than recording the occurrence of each normal operation. Dow Corning can then rely on records of any deviations to certify compliance (or noncompliance) with the requirement to have the baghouses operational at all times when the hoppers are in use. We welcome further discussion on this matter.

11. Alternate Operating Scenarios - Section B.22.c, Paragraph 8- The approach taken in this permit term is not acceptable. As written, the specific operating conditions, monitoring requirements and compliance certification requirements of the emissions cap would be approved off-permit. Such conditions must be incorporated into the title V permit as specific permit terms. Paragraph 8 should be removed, or the specific terms of the emissions cap (which has yet to be deemed approvable) should be included as the alternate operating scenario.

    Response - Paragraph 8 has been removed from the permit, since KDAQ concurs that the approach taken in its present form is unacceptable. The Group Requirements section for previous VOC synthetic minor permits has been changed considerably to address U.S. EPA concerns.

12. Missing Emission Units - It is unclear why the following previously identified (see addendum #1 to title V Specialty Permit Application for Source A, dated October 9, 1995) HAP emission points are not included on the list of Early Reductions emission points which start on page 73 of the draft permit: C 2.03, F 15.01, F 15.02, F 15.03, F 17.01, LCP .01, and W .24.

    Response - Dow has revised, not constructed, and misidentified some emission points since the time of the October 9, 1995 submittal (W.24 is actually W.23, etc). KDAQ has consulted with Dow Corning and we believe the list as it appears in the permit is the most current and accurate list of emissions points covered under the Early Reductions program.

13. Missing Applicable Requirements - It is unclear why only 31 of the 62 identified early reduction emission points have specific monitoring, record keeping, and reporting requirements since some of the emission points without specific requirements had proposed requirements in the application (e.g. emission points B2.03, D1.03, D10.03, P10.01, and T10.01).

    Response - All 74 Early Reduction emissions points are listed with specific requirements somewhere in the permit. Part of the confusion may stem from the fact that many of the Early Reduction emission points are also subject to other regulations (primarily NSPS VOC standards) and therefore, appear in other parts of the permit where similar emission units are grouped together. For example, D10.03 and D1.03 are both storage tanks and are listed along with other storage tanks in **Section B (3) Storage Tanks - Category 3** (Page 17) and **Section B (3) Storage Tanks - Category 4 b.** (Page 19) respectively. Similarly, T10.01, P10.01, and B2.03 are part of the Vent Header System and are

listed with specific requirements under **Section B (6) Vent Header System** (Page 28).

However, Kentucky DAQ has reviewed the permit and concluded that all Early Reduction emission points have specific requirements listed somewhere in the permit. Additionally, a table has been added to the Early Reductions section that lists all the HAP sources and the pages on which they appear.

General Comments

1. Typographical error - Page 4, section B(1)1., Compliance Demonstration Methods, b. - The reference to boiler 767 appears to be in error. This condition appears to apply to boilers 703 and 766.

   Response - Kentucky DAQ concurs with this comment and the appropriate change has been made in the permit.

2. Performance Testing - Page 6, section B(1)3.a. - This condition states that performance testing shall be conducted in the 12-month period immediately preceding the date of expiration of this permit. It appears that this condition will roll over to the next permit thus requiring testing every 5 years. We agree with the Division that testing every five years should be required and recommend that this be clarified in the permit condition. We recommend the same for the permit condition in Section B(6)3.

   Response - Kentucky DAQ did not intend the testing requirement to roll over to the next permit. The Division will examine the results obtained from the testing of the boilers required in this permit and shall evaluate the need for testing in the next permit on a case-by-case basis for each boiler.

   Given the importance of the T-10 Thermal Oxidizer Unit to the overall control strategy of the plant, similar testing requirements during the term of the permit have been added to Section B(6)3.

3. Compliance Certification Requirements - Page 9, section B(1)10. should be clarified. The permit states that there are no requirements but this should not be confused with the over all title V certification requirements which require that the compliance status of every unit be verified at the end of each year. This comment is germane to the Compliance Certification Requirements section contained under other emission units in the permit.
   Response - KDAQ concurs with this comment and the possibility of confusion that exists as a result of the Compliance Certification Requirements at both the individual emission point level (Section B) and the plantwide level (Section F.7). Since the time of release of this draft permit, KDAQ has changed the standard Title V permit format to make the Compliance Certification Requirement at the individual emissions point level optional, i.e., if there is no specific Compliance Certification requirement for a specific emission point (Other than the overall Title V certification), these items maybe deleted for that point in Section B. Accordingly, wherever applicable in the permit, these requirements have been removed to eliminate confusion.

4. Alternative NO_x monitoring, Boiler 767 - In the attached letter dated April 21, 1997, Region 4 provided the Kentucky Department for Environmental Protection with detailed information regarding

Dow Corning's options with respect to the use of a predictive emission monitoring system for conducting the initial NO_x performance test on Boiler 767. Also attached are copies of two other 1997 determinations that Region 4 prepared regarding NO_x parametric monitoring issues for Subpart Db boilers. Some of the important issues addressed in the attached letters are summarized below in order to ensure that Dow Corning is fully aware of its initial testing options and obligations for Boiler 767:

a. EPA approval would be required if the company wants to demonstrate compliance during the initial 30-day test using data from any source other than a certified NO_x monitor or reference method testing.

Response - Dow Corning has conducted the initial 30-day test using a NOx CEM.

b. Regardless of the data source used for the initial compliance demonstration, the first day of the 30-day test must be completed no later 30 days after the boiler reaches maximum production or 180 days after initial startup, whichever comes first.

Response - Dow Corning has conducted the initial compliance demonstration within the stipulated period

.

c. The Kentucky Department for Environmental Protection does have the authority to approve the use of a parametric emission monitoring system that would be used for NO_x excess emission monitoring following the initial 30-day compliance test.

Response - While we are aware that we have the authority to approve the use of a parametric monitoring system, Kentucky's SIP requires both Kentucky DAQ and U.S. EPA approval of any exemption from NSPS standards. Kentucky DAQ will forward the results of the initial compliance test along with a detailed parametric plan (if Dow still wants to pursue one) to U.S. EPA. If both agencies approve of the plan, Dow may proceed with the use of parametric monitoring/predictive plan instead of a CEM.

5. Specific Reporting Requirements - Page 8, section B(1)6. - Even though it is assumed that this condition applies to boiler 767, we recommend that the permit condition specify the boiler that it applies to, as it's specified in other conditions throughout the permit.
Response - Kentucky DAQ concurs with this comment and the appropriate change has been made in the permit.

6. Typographical error - Page 10, last paragraph - "For each furnace, the permittee shall comply with..."

Response - Kentucky DAQ concurs with this comment and the appropriate change has been made in the permit.

7. Typographical error - Page 12, table - All the listed tanks appear to be subject to the Early Reduction Requirements, however, they are not all marked by an asterisk.

Response - Kentucky DAQ has re-examined the list of tanks and concluded that not all of the tanks in this table are subject to Early Reductions requirements. As indicated in the permit, ONLY those points marked with an asterisk are subject to Early Reductions requirements.

8. Compliance Schedule - Page 30, section B(6)9. - The Permit Statement of Basis states that the Vent header System was tested for compliance in 1991 and 1995. If this is the case then why does section B(6)9 require more testing to determine compliance? Has compliance been demonstrated to date? We recommend that the testing data be evaluated to determine if periodic testing needs to be performed.

   Response - Testing on the Vent Header System in 1991 and 1995 was restricted to the T-10 Thermal Oxidizer Unit only. During the Title V review process, Kentucky DAQ made a determination that the P-10 Absorption Unit is an integral part of the T-10 system, and that the P-10/T-10 is a combined control system. Therefore, any testing for NSPS purposes must comprise of testing both the T-10 and P-10 Units. Since the P-10 Unit has never been tested, the Title V permit includes a requirement to test the P-10 Units (and the T-10 Unit) to determine compliance with the applicable NSPS standards (Subparts NNN, RRR) and fulfill testing requirements.

9. Applicable Regulations - The statement of basis should list 40 CFR 63 Subpart G as an applicable regulation.

   Response - Dow Corning has elected to comply with 40 CFR 63 Subpart D (Early Reductions) which specifically defers applicability of any promulgated MACT standards for a period of 6 years. Therefore, 40 CFR 63 Subpart G cannot be considered an applicable requirement at this time. No changes were made to the Statement of Basis as a result of this comments.

10. Typographical error - Page 67, sections B(22) and B(23), first paragraph - "...emissions points that were ~~permitting~~ permitted in the past..."
    Response - Kentucky DAQ concurs with this comment and the appropriate change has been made in the permit.
11. Typographical error - Page 81, section B(25)2.a. - "...the permittee shall keep a record..."
    Response - Kentucky DAQ concurs with this comment and the appropriate change has been made in the permit.
12. Typographical error - Page 83, section C.3., A-1 Process Area: (A1.03 & A1.06) - "Must ~~vented~~ vent through..."

    Response - Kentucky DAQ concurs with this comment and the appropriate change has been made in the permit.

13. Compliance Demonstration Method - Page 39, section B, Unit (9), A-2 process area, section 2(b) contains unclear language. It states that "the permittee shall determine compliance. . ." It would be better to say, "compliance shall be determined. . ." Also, it doesn't appear that this type of language has been used elsewhere in the permit by Kentucky, thus it appears inconsistent with the rest of the

permit.

Response - Kentucky DAQ concurs and has reworded this condition.

14. Previous Synthetic Minors - Page 67, Sections B.22 & B.23 - It is not clear that the synthetic minor permits C-88-068, C-89-015, and C-91-155 were not part of a larger phased construction project requiring PSD review. If so, additional PSD terms may be required in the title V permit.

Response - Kentucky DAQ believes that the Title V permit is not the appropriate venue to determine if the PSD permits issued in 1987 (C-87-059) to install the U.01 (703) boiler, and the later doubling of plant capacity with the Namex expansion (C-88-068) and the Waste water upgrade (C-89-015) were all part of a staged construction. As the PSD expansion of boiler capacity and the synthetic minor doubling of plant capacity with the Namex construction were reviewed by both the Division and Region IV, we feel that it is inappropriate to use the Title V permitting process to review a 10 year old decisions.

II. SIGNIFICANT REVISION, LOG # 53629, 53447

COMMENTS ON LOG # 53447:
This application is to replace the L-2 Furnace which is an insignificant activity. This replacement only requires a minor revision, but this revision has been combined with the significant revision for log # 53629 and is therefore covered under the permit shield. Section C of the permit has been updated to include the information for the new furnace and no other permit changes have been made pursuant to this application.

COMMENTS ON LOG # 53629:
This application has 2 parts. The first part is to permit the venting of material in the 5900 tank (which has previously been taken offsite) through Tank 954 to the 883 DPR Quench Vessel. Current operation is Tank 954 sending both its contents and vapors to the DPR Quench Vessel and the DPR Quench Vessel using emission points W.24 (quench vessel vent to atmosphere) and W.10 (quench basin for reactor bottoms open to atmosphere). Processing 5900 material in the DPR Quench Vessel through Tank 954 as proposed will make Tank 954 fully subject to 40 CFR 60 Subpart Kb with closed vent system and control device requirements, so a vent line from the DPR Quench Vessel to the Vent Header System and control devices will be constructed.

The second part of this project is replacing parts of the T-10 thermal oxidizer that is the primary control device for the Vent Header System.

Summary of changes to the permit:

1. **Section B**
   a. KyEIS ID numbers were added to some emission unit descriptions.
   b. **(3) Storage Tanks – Category 2** for Subpart Kb tanks
      Tank 954 as vented through 883 DPR Quench Vessel is added to the table of affected facilities. Subpart Kb permit conditions have been revised for clarity and consistency with (6) Vent Header System. Permit conditions for the storage tanks are in this subsection, while the requirements for control devices are in (6) Vent Header System subsection.
   c. **(3) Storage Tanks – Category 4** for Early Reductions requirements for tanks
      Tank 954 as vented through 883 DPR Quench Vessel is added to the table of affected facilities.
   d. **(4) Reactors**
      SOCMI Reactor NSPS (RRR) permit conditions have been revised for clarity.
   e. **(5) Distillation Columns – Category 1**
      SOCMI Distillation Unit NSPS (NNN) permit conditions have been revised for clarity and consistency with (6) Vent Header System. Permit conditions for the distillation units are in this subsection, while the requirements for control devices are in (6) Vent Header System subsection.
   f. **(6) Vent Header System**
      Parts of the T-10 thermal oxidizer are being replaced with a larger unit as part of this application to handle the larger flowrate during processing of 5900 material through the DPR Quench vessel and Vent Header System and to increase reliability. The description of the T-10 thermal oxidizer

was changed to reflect the new thermal oxidizer components.
NSPS (Kb, NNN, RRR) permit conditions have been revised for clarity and consistency with the affected facility subsections. Permit conditions for the control devices are in this subsection.
Permit conditions requiring performance testing of the T-10 thermal oxidizer after replacement in accordance with the NSPS requirements (40 CFR 60 Subparts NNN, RRR, Kb) have been added.
References to the synthetic minor emission limitations are added in Emission Limitations along with Compliance Demonstration Methods and Reporting.
The permit conditions for HCl and Cl_2 emission factors and calculations have been revised to incorporate and update KyEIS emission factors.

g. **(22) Wastewater Quench and Filter Press Processed**
Technical corrections were made to the emission point numbers listed in the conditions.
Compliance, monitoring, recordkeeping, and control device requirements were added for 5900 material being processed through 883 DPR Quench Vessel.

h. **(23) Group Requirements 1 – Previous Synthetic Minors (VOC)**
Since all of the equipment affected by this project are either existing equipment or replacements for existing equipment, the site-wide cap on VOC emissions of 145 tpy applies to all VOC emission units affected by this project. A statement that the VOC limit applies not only to the listed equipment but also to all unlisted equipment venting to any listed emission unit in **Section B (23) Group Requirements 1 – Previous Synthetic Minors (VOC)** has been added to the permit.
The semiannual reports has been changed from separate reports submitted by listed dates to being included as part of the semiannual monitoring report required in General Condition F. 5. in **Section F – Monitoring, Recordkeeping, and Reporting Requirements**.

i. **(24) Group Requirements 2 – Previous Synthetic Minors (PM_{10})**
The T-10 thermal oxidizer is a source of particulate emissions and was constructed as part C-88-068, (Namex Expansion) issued April 28, 1988. The thermal oxidizer has been added as a particulate emission source and compliance, monitoring, and recordkeeping permit conditions have been added in **Section B (24) Group Requirements 2 – Previous Synthetic Minors (PM_{10}).** The KyEIS will be updated to included these particulate emissions.
The semiannual reports has been changed from separate reports submitted by listed dates to being included as part of the semiannual monitoring report required in General Condition F. 5. in **Section F – Monitoring, Recordkeeping, and Reporting Requirements**.

j. **(26) Group Requirements 4 – Early Reductions Requirements**
Since all of the equipment affected by this project are either existing equipment or replacements for existing equipment, the Early Reductions requirements apply to all HAP emission units affected by this project. A statement that the Early Reductions requirements apply not only to the listed equipment but also to all unlisted equipment venting to any listed emission unit in **Section B (26) Group Requirements 4 – Early Reductions Requirements** has been added to the permit.
The semiannual reports has been changed from separate reports submitted by listed dates to being included as part of the semiannual monitoring report required in General Condition F. 5. in **Section F – Monitoring, Recordkeeping, and Reporting Requirements**.

Applicable Regulations:
The only change to applicable regulations is that 40 CFR 60 Subpart Kb now fully applies to Tank 954 when it contains 5900 material. The Vent Header System and control devices are used to comply with this regulation.

Cites to the state regulations in the revised subsections in Section B have been updated to conform with recent changes made to the organization of current state regulations.

Source-specific proposals:
Emission and Operating Caps Description:
See h., i., and j. of Summary of Permit Changes above for changes to the Synthetic Minors (VOC), Synthetic Minors (PM_{10}), and Early Reductions Emission Cap.

PUBLIC AND U.S. EPA REVIEW:

On May 16, 2001, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in The News-Democrat, the newspaper of largest circulation in Carroll County. The public comment period expired 30 days from the date of publication. During this time, the only comments received were from Dow Corning in a letter dated June 8, 2001. The division's response to these comments is included in Attachment II.A. to this section. As a result of the comments received from Dow Corning, there are only insignificant changes in the proposed permit from the draft permit.

The proposed permit and all supporting materials were made available to U.S. EPA, Region IV for review. The 45-day EPA review period begins on the date on the front of this document. The proposed permit shall become the final permit unless the U.S. EPA files an objection pursuant to Regulation 401 KAR 52:100, Section 10.

ATTACHMENT I.B.

RESPONSE TO DOW CORNING COMMENTS

DOW CORNING COMMENTS, TITLE V DRAFT PERMIT

A. On the Permit Statement Of Basis

On page 1, hydrochloric acid is listed as one of three primary raw materials. Hydrochloric acid should be replaced with "methyl chloride". Hydrochloric acid is an intermediate reactant.

DAQ response: *Hydrochloric acid is a raw material so it will remain in the list. Methyl chloride has been added to the list since it is also purchased as a raw material.*

B. On the Draft Revised Permit

1. On the title page, there are 2 SIC codes listed: 2821 and 2869. 2821 does not apply to the Dow Corning Carrollton site. Industrial production of both MeCl and silicones falls under SIC code 2869.

   DAQ response: *2821 has been removed from the title page and the cover page of the permit package.*

2. The date of construction for the new T10 unit on page 28 currently reads "2001 (anticipated)". The timeline for this construction project has recently changes. This should now read, "mid-2001 to mid-2002."

   DAQ response: *This is descriptive only and does not need to be changed.*

III. MINOR REVISION, LOG # 53465

COMMENTS ON LOG # 53465:
This project replaces the existing Spent Bed Quench Process permitted as emission point W.22 with a new Spent Bed Process permitted as W.25 and W.26. W.25 is T6201 tank, 6222 quench mixer, and 6223 pug mill. W.26 is the 6223 extruder.

Summary of changes to the permit:

2. **Section B**
   a. KyEIS ID numbers were added to some emission unit descriptions.
   b. **(22) Wastewater Quench and Filter Press Processed**
      Technical corrections were made to the emission point numbers listed in the conditions.
      W.25 and W.26 were added to each condition that lists W.22.
   c. **(23) Group Requirements 1 – Previous Synthetic Minors (VOC)**
      Since all of the equipment affected by this project are either existing equipment or replacements for existing equipment, the site-wide cap on VOC emissions of 145 tpy applies to all VOC emission units affected by this project.
      W.25 and W.26 were added to the list of affected equipment.
   d. **(26) Group Requirements 4 – Early Reductions Requirements**
      Since all of the equipment affected by this project are either existing equipment or replacements for existing equipment, the Early Reductions requirements apply to all HAP emission units affected by this project.
      W.25 and W.26 were added to the list of affected equipment.

PUBLIC AND U.S. EPA REVIEW:

Public review is not required for a minor revision.

The proposed minor revision and all supporting material were made available to U.S. EPA, Region IV for review. The 45-day EPA review period begins on the date on the front of this document. The proposed permit shall become the final permit unless the U.S. EPA files an objection pursuant to Regulation 401 KAR 52:100, Section 10.